ABSTRACT

The invention relates to a modified lymphoid cell having gene conversion fully or partially replaced by hypermutation, wherein said cell has no deleterious mutations in genes encoding paralogues and analogues of the RAD51 protein, and wherein said cell is capable of directed and selective genetic diversification of a target nucleic acid by hypermutation or a combination of hypermutation and gene conversion. The invention also relates to a method for diversifying any transgenic target gene in said cell. Preferably, the target gene is integrated into the immunoglobulin light or heavy chain locus by targeted integration.